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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,127	03/15/2004	Daniel A. Chandler	MP1744-US1	3409
27788 7590 06/25/2007 TYCO ELECTRONICS CORPORATION MAIL STOP R20/2B 307 CONSTITUTION DRIVE MENLO PARK, CA 94025			EXAMINER BAISA, JOSELITO SASIS	
			ART UNIT 2832	PAPER NUMBER
			MAIL DATE 06/25/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/802,127

Applicant(s)

CHANDLER ET AL.

Examiner

Joselito Baisa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5, 9, 11 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Wartenberg et al. [5747147].

Regarding claims 1 and 11, Wartenberg discloses a laminar PTC resistive element 3 having first and second major surfaces and a thickness therebetween;

a first electrode layer 7 formed at the first major surface and being substantially coextensive therewith, and comprising a first metal material of a type adapted to be soldered to a printed circuit substrate for effecting surface mounting of the device;

a second electrode layer 5 formed at the second major surface and being substantially coextensive therewith; and

weld plate [Col. 5, Lines 48-52] means of metal material extending from the second electrode layer and having a volume, thickness and thermal mass capable of withstanding resistance micro spot welding of a strap interconnect [Col. , Lines 46-48] means without significant resultant damage to the device [Col. 6, Lines 13-19, Figure ] .

Regarding claim 2, Wartenberg discloses the second electrode layer 5 is formed as a foil layer, and wherein the weld plate means is formed separately of the second electrode layer 5 and

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is attached thereto by an attachment layer of electrically conductive material [Col. 5, Lines 52-53].

Regarding claim 5, Wartenberg discloses the attachment layer comprises solder [Col. 5, Lines 52-53].

Regarding claim 9, Wartenberg discloses a printed circuit board assembly to which the device is surface mounted and electrically connected [Col. 1, Lines 54-58].

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4, 6-8, 10, 12-16 and 18- 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wartenberg et al. in view of Banich et al. [6104587].

Regarding claims 3, 4, 15 and 20, Wartenberg disclose the instant claimed invention discussed above except for the weld plate comprises nickel.

Banich discloses a weld plate 75 comprises nickel [Col. 5, Lines 8-10].

It would have been obvious to one having ordinary skill in the art at the time of the invention to use a weld plate as taught by Banich to the circuit protection device of Wartenberg.

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The motivation would have been to establish electrical stability of the device by using nickel for good adhesion [Col. 5, Lines 1-3].

Regarding claims 6 and 16, Banich discloses the weld plate means 75 includes a raised central mesa region and further comprising an insulative box 13 surrounding outer edges of the device and defining an opening exposing the central mesa region 75 [Col. 6, Lines 46-55, Figure 2].

Regarding claims 7, 8, 12 and 19, Banich discloses the weld plate means has a minimum thickness in a range of 0.100 mm and 0.300 mm [Col. 5, Lines 6-8].

Regarding claim 10, Banich discloses a printed circuit board assembly forms a battery protection circuit module and is mounted to and electrically connected to a battery or cell by battery strap interconnects, one of said battery strap interconnects being micro spot welded to the weld plate means [Col. 1, Lines 41-50].

Regarding claim 13, Banich discloses the weld plate has a thickness of approximately 0.250 mm and wherein the strap interconnect means has a thickness not substantially greater than 0.150 mm [Col. 5, Lines 1-8].

Regarding claim 14, Banich discloses the weld plate has a thickness of approximately 0.250 mm and the strap interconnect means has a thickness not substantially greater than

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approximately 0.250 mm and defines an energy directing opening across which resistance micro spot welds are placed [Col. 5, Lines 1-8].

Regarding claim 18 Banich discloses a first tab comprising strap interconnect means being micro spot welded to the weld plate, and a second tab being connected to circuitry of the printed circuit substrate [Col. 1, Lines 43-48].


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joselito Baisa whose telephone number is (571) 272-7132. The examiner can normally be reached on M-F 5:30 am to 2:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joselito Baisa  
Examiner  
Art Unit 2832

jsb

  
ELVINI ENNAD  
SUPERVISORY PATENT EXAMINER  
21 JUNE 7